AFRL Work Unit Definition



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Ground Rules



- Define Work Unit (WU) for a complete Life-Cycle View
 - Encompass WU from Inception (when it really begins as an independent/ defined entity) through Retirement of its Case File
 - As Defined by Information Technology for the S&E (ITSE) and Integrated Project Management (IPM) Teams - Further Refine as Necessary
 - Implement business rules associated with definition in AFRL EBS Tool Suite (P&P, IPM, FM, etc.)
- Align Key Actions/ Roles for Each Phase of WU Life
- Include any Unique Actions or Application due to Research Category
 - Basic Research
 - Applied Research
 - Advanced Development & Advanced Component Development and Prototypes Research
 - Other Research



Ground Rules



- Link to Approved R&D Hierarchy
 - Defined by AF and AFRL Instructions Update as Necessary
 - As Modified and Approved by AFRL Functional Integration Team (FIT) - Further Refine as Necessary
 - Hierarchy Should Show "Budget Linage" from Parent to Child for Accurate Roll-up Data - Clear relationship for Financial Views
- Support Requirements Dictated in DoD and AF Directives
 - Facilitate Case file and DTIC Reporting
 - Support Capabilities Planning Process
 - Eliminate Unnecessary Duplication of Effort and Resources



Ground Rules



- Identify Any Changes or Standardization Required of Work Unit Number/ Job Order Number (JON) Structure to Support WU Definition
- Coordinate Actions with HQ & TD Staffs
- Publish Decisions and Modifications as Revisions to Existing AFRLIs



Assumptions



- Hierarchy in AFRL Instructions is Sound Overall
 - Definitions Refined by ITSE Team and Modifications Made & Approved by FIT - May Need Some Minor Tweaking for Completeness/ Clarification
 - Requires Standard Implementation by all Technical Directorates (TDs) - Common Understanding/ Application
- WU Definition will Ensure Ability for AFRL "Single Truth" Financial Data
 - WU Definition & Associated Standard Hierarchy developed with TD Input
 - Final Draft Definition & Standard Hierarchy to be Reviewed and Approved by HQ AFRL/XP/FM/RM/S&E Champions
 - Final WU Definition/ Hierarchy Approval by AFRL/DI
- WU Definition and Standard Hierarchy will Assure Roll-up Reporting to be Equitable Across AFRL for Financial and/or Capabilities Views
 - Common Data Input Across AFRL Standard Hierarchy Level
 - Standard Reports in AFRL IPM, P&P and FM Tools



Need for "Work Units"



- Regulatory Requirements (DoD Directives; AFIs; AFRLIs); Document Research to:
 - Prevent Duplication and Conserve Limited S&T Funds
 - Facilitate Collaboration or Coordinate Research Actions within AF/ DoD and between AF/ DoD and Industry/ Education
 - Manage at Basic Level for Improved Linkage/
 Application to Other Research Efforts/ Capabilities
- Provide a Logical Break-out of the Research Being Performed
 - Show How Research Aligns/ Relates/ Contributes to the Overall Capability at the TD Or HQ Level
 - Documentation Trail to Track to the Overall Objective
 - Documented By Research Manager (Project Manager or Work Unit Manager) to Facilitate Collaboration



Primary Work Unit Customers



- Three Primary Customers
 - Scientist/ Engineer Managing the Work Unit Tasks
 - Those Providing Functional Support (DM-RM, FM, P&P, etc.) to Work Unit Managers
 - Higher-Level Manager (Division Chief, Branch Chief, Capability or Focus Area Lead or below) with Oversight of Work Unit Groupings



Primary AFRL Customers



- Three Primary "Research" Customers
 - Technical Directors for Financial and Overall Management
 - HQ AFRL for Overall Capabilities and Financial Management
 - Mission Customers for Capability Implementation





Hierarchy

- A series of ordered groupings of people or things within a system. (WordNet ® 1.6, © 1997 Princeton University)
- An organization with few things, or one thing, at the top and with several things below each other thing. An inverted tree structure. (The Free On-line Dictionary of Computing, © 1993-2003 Denis Howe)
- Akin to "taxonomy" (Division into ordered groups or categories The American Heritage® Dictionary, Fourth Ed. © 2000 Houghton Mifflin Co.) and "work breakdown structure" (A division of a project into tasks and subtasks. The tasks are numbered to indicate their relationship to each other. The Free On-line Dictionary of Computing, © 1993-2003 Denis Howe).
- A cascading/inverted tree relationship of information in structured groupings by defined levels. Grouping levels maintain a "Parent-Child" relationship. (AFRL EBS PO)



Need for "Core" R&D Hierarchy



- Provides ability for consistent views/ analysis of:
 - Internal TD data for Internal Management Purposes
 - Rolled-up TD data within the TD or across TDs by HQ AFRL
 - Common data used between TDs or across TDs & HQ AFRL
- Provides Ease of Aligning TD Data to HQ (AFRL and/or AFMC) "bins" or HAF Requests for Information
 - Consistent application across all TDs
 - Provides improved ability for HQ to determine alignment level for reporting
 - Assures consistent mapping of data between "capabilities" for accurate "sharing" of data
 - Data aligned to defined hierarchal levels within the database to facilitate standard report generation for specified levels
- Key requirement for <u>integrated</u> data within AFRL EBS
 - Common data structure for all tools
 - Common understanding of data elements throughout AFRL



WU Definition/Hierarchy Capability

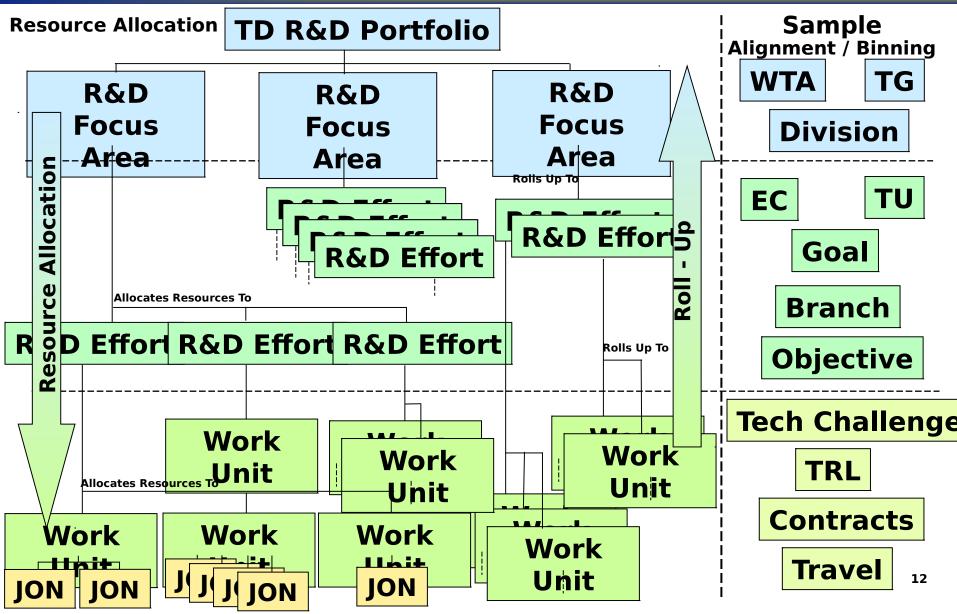


- WU Hierarchy Data Structure for P&P, IPM, FM, RM/HR, etc. Capabilities
 - Standard structure for P&P and FM funding allocations and relationship/ linkage between planning, programming and execution
 - Common Hierarchy elements for standard attribute and binning assignment
 - Structured elements to provide end-state baseline for data transition between planning, programming and execution capabilities
- Clear Definition of Work Unit and other Hierarchical Elements
 - Common application of elements to information throughout AFRL
 - Eased implementation/ alignment of new attributes or bins as required to support customer and higher HQ reporting



R&D <u>Portfolio</u> Core Hierarchy









- Work Unit The smallest segment into which R&D Efforts are divided. (Delete and replace with below)
- A low or basic level of categorization of R&D activity within a TD. (TDs may have research activities below Work Unit and levels of management between Work Unit and the next level up, R&D Effort, but these levels must maintain the parent-child relationship with both Work Unit and R&D Effort for consistent roll-up of information/ capability.)
- Work Units <u>document our scientific research</u> work at a level that:
 - 1) minimizes duplication (concurrent and non-concurrent) and maximizes collaboration (concurrent and follow-on research),
 - 2) supports customer relations (through consistent views across AFRL), and
 - 3) bolsters managing the research.





 WUs are the basic building blocks of our technology programs and documentation of technical activity. The purpose of the work unit is to define activities that will allow the reporting, measurement, and evaluation of time, work, cost, and productivity. They should be defined no lower than the lowest level needed to properly manage research activities (including measure progress); document the research approach and results to maximize collaboration, minimize duplication and manage customer relations; and align as appropriate to strategic and tactical planning constructs. They should not be defined at a level too high such that the WUM cannot provide the necessary technical and administrative oversight needed to ensure compliance with higher level directives to identify distinct "efforts", promote collaboration and exchange of STINFO, coordinate efforts, and report on so that time, work, cost, and productivity of each WU may be effectively managed, reviewed, and reported.





- Each WU has a specific objective, a definite beginning and end (not more than 8 years for in-house), and a tangible or reportable end product (e.g., a technical report, a piece of hardware or software). WUs should not be confused with subtasks or experiments that have definite beginnings and ends and tangible products that are integrated with or feed the next task/experiment in order to produce the WU end product.
- Each work unit will have its own DTIC accession number. Each work unit will have a case file.





- It is a technically distinct, in-house or extramural effort (i.e., R&D contract, R&D contract subtask/ task order, grant, cooperative research and development agreement, etc.). It can be a combination of in-house and extramural effort contractual research, but the Work Unit must be declared as an in-house or extramural effort based on the preponderance of the type of effort. (WUs should not be confused with funding execution vehicles, such as contracts that integrate more than one WU's requirements into one contracting vehicle and/or R&D requirements performed by a single vendor.)
- Application of WU to each category of R&D (6.1, 6.2, & 6.3)
 - 6.1 Typically, a contract or a grant
 - 6.2 Typically, contract and/or in-house work; can be combined with other WUs as parts of a larger contract with a single vendor, but contract is not a WU
 - 6.3 Typically, contract and/or in-house work (ATD or CE)





- R&D Effort A unique technology development activity.
 The responsible TD determines the total scope of the R&D Effort. An R&D Effort is comprised of one or more Work Units.
- The core hierarchy mid-tier level of categorization of R&D activity within a TD. (TDs may have levels of management between R&D Effort and R&D Focus Area, but must maintain the parent-child relationship with both R&D Effort and R&D Focus Area for consistent roll-up of information/capability. This level of R&D activity may be "named" by a TD as other than "R&D Effort" but must map directly to the "R&D Effort" definition and maintain the same attributes.)
 - R&D Effort is a unique technology development activity, usually narrower in scope than the R&D Focus Area to which it is aligned.
 - For cross-cutting technology, the responsible TD determines the total scope of the R&D Effort.
 - An R&D Effort is comprised of one or more Work Units.





• R&D Focus Area -The highest level of categorization of R&D Activity within a TD. A broad, but integrated grouping of associated R&D activities within a TD's R&D Portfolio, comprised of one or more R&D Efforts that directly or strongly link to the R&D Focus Area. (This level of R&D activity may be "named" by a TD as other than "R&D Focus Area" but must map directly to the "R&D Focus Area" definition and maintain the same attributes.)





- The total collection of R&D Focus Areas (comprised of R&D Efforts and their Work Units) across a TD whose descriptions and categorization are derived from and support the AF S&T Plan and build the AFRL Business Plan, Program Objective memorandum (POM) and descriptive summaries.



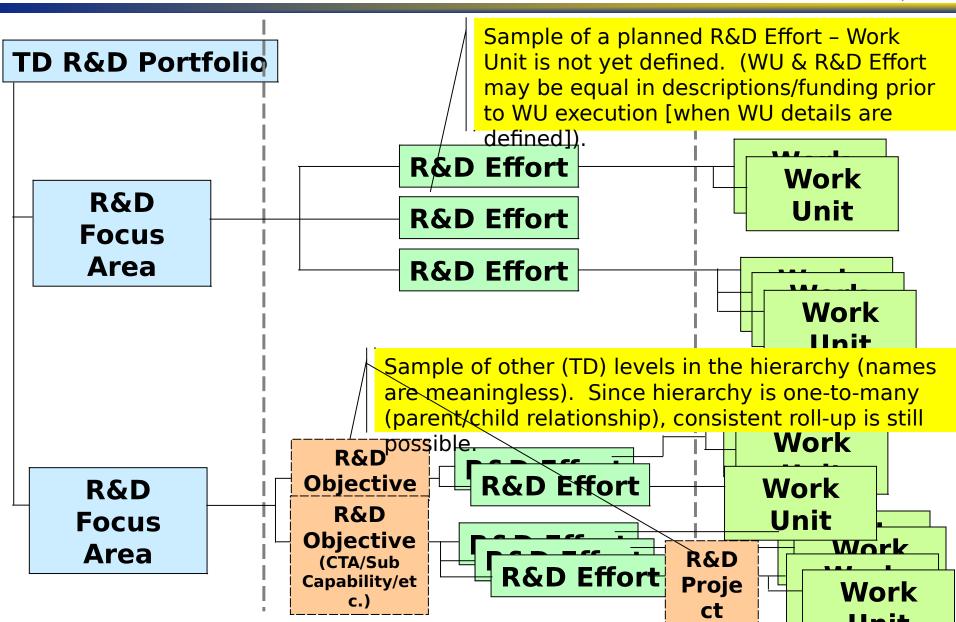


- <u>Job Order Number (JON)</u> An administrative subdivision in the Job Order Cost Accounting System (JOCAS) for accumulating costs, assigning funding, and effecting transfers of funds. *JONs identify the funding sources for each WU. (JONs are execution year financial management tracking attributes.)*
 - One or more JONs may support a WU. There must be only one WU per JON. Each JON may align to only one WU, however, to maintain the funding source identification of that WU.
 - The JON is an eight-digit alphanumeric code to best manage funds tracking of the R&D Efforts and WUs.
 - A JON record must maintain traceability to its WU, its funding source, and its record of expenditures for its entire life.



Sample R&D Core Hierarchy

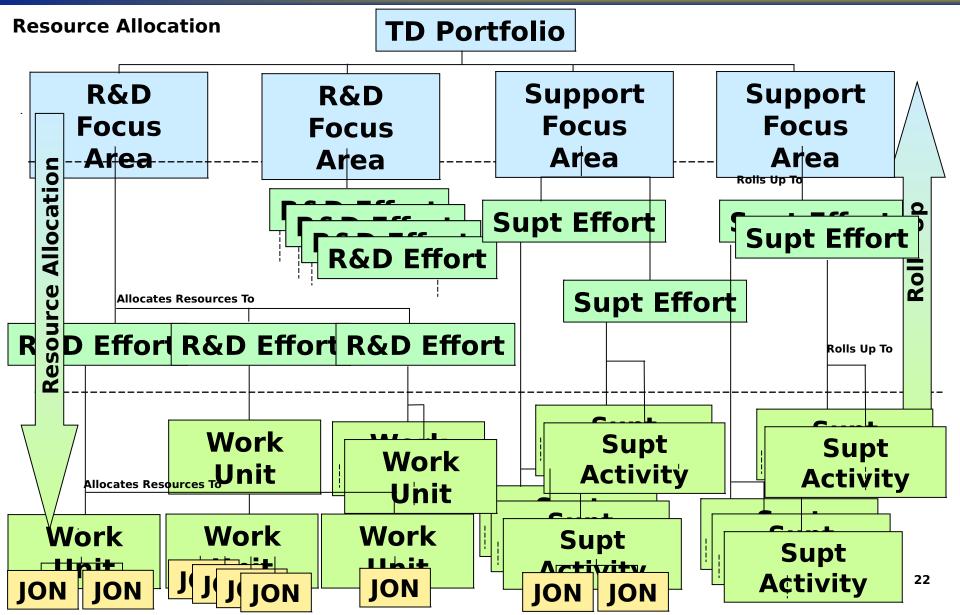






AFRL <u>Portfolio</u> Core Hierarchy









- <u>Support Activity</u> A low or basic level of categorization of support or non-R&D activity within a TD. The purpose of the Support Activity is to define non-R&D work at a level that will allow the reporting, measurement, and evaluation of time, work, cost, and productivity.
 - Each Support Activity has a specific objective and may have a specific beginning and end and tangible product.
 - Each Support Activity will have a non-DTIC reportable case file (a complete R&D case file is only required for DTIC reportable WUs, Support Activities may have abbreviated case files and maintain only those elements pertinent to the activity being performed).





- <u>Support Effort</u> The core hierarchy mid-tier level of categorization of Support actions within a TD. (TDs may have levels of management between Support Effort and Support Focus Area, but must maintain the parent-child relationship with both Support Effort and Support Focus Area for consistent roll-up of information/ capability. This level of non-R&D activity may be "named" by a TD as other than "Support Effort" but must map directly to the "Support Effort" definition and maintain the same attributes.)
 - Support Effort is a unique non-technology development activity, usually narrower in scope than the Support Focus Area to which it is aligned.
 - A Support Effort is comprised of one or more Support Activities.





• <u>Support Focus Area</u> -The highest level of categorization of Support actions within a TD. A broad, but integrated grouping of associated Support work within a TD's Portfolio, comprised of one or more Support Efforts that directly or strongly link to the Support Focus Area. (This level of non-R&D activity may be "named" by a TD as other than "Support Focus Area" but must map directly to the "Support Focus Area" definition and maintain the same attributes.)





 TD Portfolio - The total collection of R&D Focus Areas (comprised of R&D Efforts and their Work Units) and Support Focus Areas (comprised of Support Efforts and their Support Activities) across a TD whose descriptions and categorization are derived from and support the AF S&T Plan and build the AFRL Business Plan, Program Objective memorandum (POM) and descriptive summaries.



aligned

Work Unit Life-Cycle "Lust-to-Dust" - <u>Future Years</u>



				cako
	POM			
FY+8	FY+7	FY+6	FY+	FY+4
&^			_	
New science/ research requirement identified Aligned to existing or new R&D Effort Funding needs determined Rough schedule planned All require- ments fuzzy	- Funding wedge determined - Aligned to Exist-ing R&D Effort or new Planned R&D Effort - New planning WU defined (high- level/broad may just be same as the R&D Effort) - Budget details	- Planning R&D Effort/ WU in TD plan portfolio (still high level, but beginning to be refined) - Funding wedge refined (based on external and internal adjustments) - Budget	- Planning R&D Effort/ WU in TD plan portfolio (continues at high level, but refined more) - Funding firmed to WU (may no longer be a wedge) - Budget details	- Planning R&D Effort/ WU in TD plan portfolio (continues at high level with further refinement) - Funding firmed and refined - Budget details refined for WU(s) & funding
No funding	identified to funding	details	aligned with	sources 27



Key Roles - Actions



- TD (Beyond POM Years No Funding Aligned)
 - TD Leadership (Director/ Division Chiefs)
 - Coordinate with HQ AFRL and External Customers to Identify Science/ Capability Needs
 - Review Existing TD Science Portfolio Against TD and AF S&T Plan/ Customer Requirements and Define S&T Gaps
 - Address Gaps in TD S&T Plan and Submit to HQ AFRL for AF S&T Plan
 - R&D Effort Manager (Branch Chiefs/ Effort Managers)
 - Coordinate with S&T Community (DoD, Industry, & Academia) for Activity that may Address Gaps (May be 6.1 Funded Activity or Other)
 - Identify Conceptual TD R&D Efforts and/ or Work Units for Customer Needs
 - TD HR &/or FM Integrate Workforce Shaping Initiatives with TD Strategic/ Capability Planning
 - TD POM Planners (Business Office/ TD P&P Folks) no action
 - TD FM no action (other than HR)

FY+8

- New science/ research requirement identified
- Aligned to existing or new R&D Effort
- Funding needs determined
- Rough schedule planned
- All requirements fuzzy
- No funding aligned

No R&D Effort or WU assigned



Key Roles - Actions



- HQ AFRL (Beyond POM Years No Funding Aligned)
 - Strategic Planners
 - Develop AF S&T Plan
 - Integrate TD and Other Inputs into AF S&T Plan
 - RM &/or FM Integrate Workforce Shaping Initiatives with AF S&T Planning
 - P&P no action
 - FM Folks no action (other than RM)

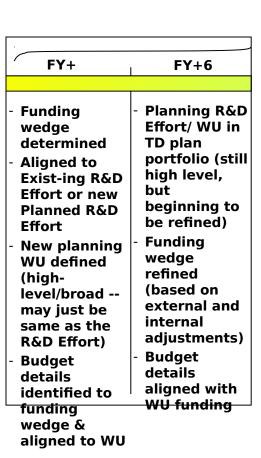
- FY+8
- New science/ research requirement identified
- Aligned to existing or new R&D Effort
- Funding needs determined
- Rough schedule planned
- All requirements fuzzy
- No funding aligned

No R&D Effort or WU assigned





- TD (Future Year Planning POM Out-Years)
 - TD Leadership (Director/ Division Chiefs)
 - Review Existing TD Portfolio Against TD & AF S&T Plans/ Customer Requirements, Adjust S&T Focus Accordingly, and Define R&D Gaps
 - Review R&D Effort Roadmaps Against Requirements
 - Increase/ Decrease Emphasis on Ongoing R&D Efforts and Adjust Funding Correspondingly
 - Discontinue Funding for Unproductive or Unnecessary R&D Efforts
 - Review Proposed New R&D Efforts and/ or Work Units Needed to Address Gaps
 - Decide Which R&D Efforts/ WUs to Start in POM Out-Years
 - Review Available Funding for New R&D Efforts/ WUs
 - Add New R&D Efforts to Portfolio As Needed and Funding Available



R&D Effort=WU

R&D Effort=WU





- TD (Future Year Planning POM Out-Years)
 - TD POM Planners (Business Office/ TD P&P Folks)
 - Review TD Requirements Against ABIDES Allocation Baseline and AF S&T Plan
 - Identify Available Funding for New R&D Efforts/ WUs
 - Coordinate with TD Leadership and/ or R&D Managers on Allocation of Available Funding to Proposed R&D Efforts/ WUs
 - FY+7 Coordinate with R&D Managers on Specific Requirements and Schedule (via internal TD process)
 - FY+6 Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments
 - Document New Requirements/ Changes in TD POM Submissions

TD HR &/or FM - align out year funding to proposed workforce requirements (workforce shaping initiatives)

TD FM - no direct action (other than HR)

FY+	FY+6
- Funding wedge determined - Aligned to Exist-ing R&D Effort or new Planned R&D Effort - New planning WU defined (high- level/broad may just be same as the R&D Effort) - Budget details identified to funding wedge &	- Planning R&D Effort/ WU in TD plan portfolio (still high level, but beginning to be refined) - Funding wedge refined (based on external and internal adjustments) - Budget details aligned with WU funding

R&D R&D Effort=WU Effort=WU

aligned to WU





- TD (Future Year Planning POM Out-Years)
 - R&D Effort Manager (Branch Chiefs/ Effort Mgrs)
 - FY+7 (or year funding inserted into POM) Draft High-Level Description for Effort/ WU, ROM Cost, High-Level Schedule, & High-Level Milestones per TD Leadership Gap Information
 - FY+7 (or year funding wedge inserted into POM) obtain WU # (may be assigned by higher leadership level based on TD approval process/ business rules - doesn't need to be DTIC accession # until near execution year), and define high-level Planning budget detail (not Planning JON)
 - Both years Coordinate with TD P&P on Requirements and Schedule (via internal TD process)
 - FY+6 Refine Description, Schedule, & Milestones (if information available to do this)
 - FY+6 Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on K&D Efforts/ WUs (if can be determined at this high level of description/ activity)
 - Refine requirements and associated schedule 3, adjustments
- FY+ FY+6 Planning R&D **Funding** Effort/ WU in wedae TD plan determined portfolio (still Alianed to high level, Exist-ing R&D but Effort or new beginning to Planned R&D be refined) Effort **Funding** New planning wedge **WU** defined refined (high-(based on level/broad -external and may just be internal same as the adjustments) R&D Effort) **Budget Budget** details details aligned with identified to **WU funding funding** wedge & aligned to WU
- R&D Effort=WU

R&D Effort=WU





 TD (Future Year Planning - POM Out-Years)

Work Unit Manager (S&E) - Optional (may be done by R&D Effort Manager)

- Draft High-Level Description for Effort/ WU, ROM Cost, High-Level Schedule, & High-Level Milestones per R&D Effort Manager
- obtain WU # (may be assigned by higher leadership level based on TD approval process - doesn't need to be DTIC accession # until near execution year), and define highlevel Planning budget detail (not Planning JON)

FY+	FY+6
- Funding wedge determined - Aligned to Exist-ing R&D Effort or new Planned R&D Effort - New planning WU defined (high- level/broad may just be same as the R&D Effort) - Budget details identified to funding wedge & aligned to WU	- Planning R&D Effort/ WU in TD plan portfolio (still high level, but beginning to be refined) - Funding wedge refined (based on external and internal adjustments) - Budget details aligned with WU funding





- HQ AFRL (Future Year Planning POM Out-Years)
 - HQ POM Planners (HQ P&P Folks)
 - Review Overall TD Requirements Against ABIDES Baseline and AF S&T Plan
 - Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Focus Areas per Budget Changes and/or S&T Plan Goals/ Objectives to Senior Leadership
 - Recommend Adjustments to and Final AFRL POM Position to Senior Leadership
 - Document New Requirements/ Changes in AFRL POM Submissions

 HQ RM &/or FM - Integrate Workforce Shaping Initiatives with Out-Year Planning

HQ FM - no direct action (other than RM)

FY+	FY+6
- Funding wedge determined - Aligned to Exist-ing R&D Effort or new Planned R&D Effort - New planning WU defined (high- level/broad may just be same as the R&D Effort) - Budget details identified to funding wedge &	- Planning R&D Effort/ WU in TD plan portfolio (still high level, but beginning to be refined) - Funding wedge refined (based on external and internal adjustments) - Budget details aligned with

aligned to WU

Effort=WU

R&D





- TD (Future Year Planning POM Mid-Years)
 - TD Leadership (Director/ Division Chiefs)
 - Review Existing TD Portfolio Against TD & AF S&T Plans/ Customer Requirements and Adjust S&T Focus Accordingly
 - Review R&D Effort Roadmaps Against Requirements
 - Increase/ Decrease Emphasis on Ongoing R&D Efforts and Adjust Funding Correspondingly
 - Discontinue Funding for Unproductive or Unnecessary R&D Efforts
 - Review Available Funding for New R&D Efforts/ WUs
 - Review Proposed New R&D Efforts and/ or Work Units Needed to Address Gaps
 - Decide Which R&D Efforts/ WUs to Start in POM Mid-Years
 - Add New R&D Efforts to Portfolio As Needed and Funding Available

- FY+ **FY+4 Planning Planning** R&D Effort/ R&D Effort/ WU in TD WU in TD plan plan portfolio portfolio (continues (continues at at high high level with further level. but refinement) refined more) **Funding** firmed and Fundina firmed to refined WU (may no **Budget** longer be a details wedge) refined for **Budget** WU(s) & details funding aligned with sources **WU funding**
- R&D Effort may have multiple WUs





- TD (Future Year Planning POM Mid-Years)
 - TD POM Planners (Business Office/ TD P&P Folks)
 - Review TD Requirements Against ABIDES Allocation Baseline and AF S&T Plan
 - Identify Available Funding for New R&D Efforts/ WUs
 - Coordinate with TD Leadership and/ or R&D Managers on Allocation of Available Funding to Proposed R&D Efforts/ WUs
 - Coordinate with R&D Managers on Specific Requirements and Schedule (via internal TD process)
 - Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments
 - Document New Requirements/ Changes in TD POM Submissions
 - TD HR &/or FM align out year funding to proposed workforce requirements (workforce shaping initiatives)
 - TD FM no direct action (other than HR)
- FY+ FY+4 **Planning Planning** R&D Effort/ R&D Effort/ WU in TD WU in TD plan plan portfolio portfolio (continues (continues at at high high level with further level. but refinement) refined more) **Funding** firmed and - Fundina firmed to refined WU (may no **Budget** longer be a details wedge) refined for WU(s) & Budget details funding aligned with sources
- R&D Effort may have multiple WUs

WU funding





- TD (Future Year Planning POM Mid-Years)
 - R&D Effort Manager (Branch Chiefs/ Effort Mgrs)
 - (Year funding inserted into POM) Draft High-Level Description for Effort/ WU, ROM Cost, High-Level Schedule, & High-Level Milestones per TD Leadership Gap Information
 - (Year funding inserted into POM) Obtain WU # (may be assigned by higher leadership level based on TD approval process/ business rules - doesn't need to be DTIC accession # until near execution year), and define highlevel Planning budget detail (not Planning JON)
 - Coordinate with TD P&P on Requirements and Schedule (via internal TD process)
 - Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments

FY+	FY+4
- Planning R&D Effort/ WU in TD plan portfolio (continues at high level, but refined more) - Funding firmed to WU (may no longer be a wedge) - Budget	- Planning R&D Effort/ WU in TD plan portfolio (continues at high level with further refinement) - Funding firmed and refined - Budget details refined for WU(s) &
details	funding
aligned with	sources

R&D Effort may have multiple WUs

WU funding





- TD (Future Year Planning POM Mid-Years)
 - Work Unit Manager (S&E) Optional (may be done by R&D Effort Manager)
 - Draft High-Level Description for Effort/ WU, ROM Cost, High-Level Schedule, & High-Level Milestones per R&D Effort Manager
 - Obtain WU # (may be assigned by higher leadership level based on TD approval process - doesn't need to be DTIC accession # until near execution year), and define highlevel Planning budget detail (not Planning JON)

FY+	FY+4
 Planning R&D Effort/ WU in TD plan portfolio (continues at high level, but refined more) Funding firmed to WU (may no longer be a wedge) Budget details aligned with WU funding 	 Planning R&D Effort/ WU in TD plan portfolio (continues at high level with further refinement) Funding firmed and refined Budget details refined for WU(s) & funding sources

R&D Effort may have multiple WUs





 HQ AFRL (Future Year Planning - POM Mid-Years)

HQ POM Planners (HQ P&P Folks)

- Review Overall TD Requirements Against ABIDES Baseline and AF S&T Plan
- Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Focus Areas per Budget Changes and/or S&T Plan Goals/ Objectives to Senior Leadership
- Recommend Adjustments to and Final AFRL POM Position to Senior Leadership
- Document New Requirements/ Changes in AFRL POM Submissions
- HQ RM &/or FM Integrate Workforce Shaping Initiatives with Out-Year Planning
- HQ FM no direct action (other than RM)

FY+	FY+4
- Planning R&D Effort/ WU in TD plan portfolio (continues at high level, but refined more) - Funding firmed to WU (may no longer be a wedge) - Budget details aligned with	 Planning R&D Effort/ WU in TD plan portfolio (continues at high level with further refinement) Funding firmed and refined Budget details refined for WU(s) & funding sources

R&D Effort may have multiple WUs



Work Unit Life-Cycle "Lust-to-Dust" - <u>Near Years</u>



*			~
P	ОМ	Budget	Execution
FY+	FY+	FY+1	FY
 - R&D Effort & WU(s) in TD plan portfolio (lower level definition, but still not final) - Funding refined per lower level definition - WU def refined and possibility of additional WUs for R&D Effort or new budget details to track additional funding 	 WU(s) in TD plan portfolio (lower level definition, more refined) Funding defined per low level definition & all sources identified WU Type defined for all WUs Add'l budget details determined per funding sources 	- WU(s) in TD budget portfolio - Requirements clearly defined - Execution Year Funding/ sources finalized - PRs drafted - STINFO research performed and Execution WU assigned - Execution JONs defined/ assigned - JON(s) linked to WU(s)	 WU in TD fund portfolio Requirements defined per plan JON(s) linked to WU(s)/ funding sources Funding execut-ed per plan or per execution year modifications (Congressional ads/changes or refocusing40 of technology



additional

funding sources

planned

Key Actions/ Use Cases



- TD (Near Year Planning POM Near-Years)
 - TD Leadership (Director/ Division Chiefs)
 - Review Existing TD Portfolio Against TD & AF S&T Plans/ Customer Requirements and Adjust S&T Focus Accordingly
 - Review R&D Effort Roadmaps Against Requirements
 - Increase/ Decrease Emphasis on Ongoing R&D Efforts and Adjust Funding Correspondingly
 - Discontinue Funding for Unproductive or Unnecessary R&D Efforts
 - Review Available Funding for New R&D Efforts/ WUs
 - Review Proposed New R&D Efforts and/ or Work Units Needed to Address Gaps
 - Decide Which R&D Efforts/ WUs to Start in POM Mid-Years
 - Add New R&D Efforts to Portfolio As Needed and Funding Available

- FY+ FY+2 WU(s) in TD R&D Effort & WU(s) in TD plan portfolio (lower level plan portfolio definition, more (lower level definition. but refined) still not final) **Funding defined** per low level Fundina definition & all refined per lower level sources definition identified WU def refined |-WU Type defined for all and possibility WUs of additional WUs for R&D Add'l budget Effort or new details budget details determined per to track funding sources
 - POM Mid-Years

 Add New R&D Efforts t





- TD (Near Year Planning POM Near-Years)
 - TD POM Planners (Business Office/ TD P&P Folks)
 - Review TD Requirements Against ABIDES Allocation Baseline and AF S&T Plan
 - Identify Available Funding for New R&D Efforts/ WUs
 - Coordinate with TD Leadership and/ or R&D Managers on Allocation of Available Funding to Proposed R&D Efforts/ WUs
 - Coordinate with R&D Managers on Specific Requirements and Schedule (via internal TD process)
 - Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments
 - **Document New Requirements/ Changes in TD POM Submissions**
 - TD HR &/or FM align near year funding to proposed workforce requirements (workforce shaping initiatives)
 - TD FM no direct action (other than HR)

FY+ FY+2 WU(s) in TD R&D Effort & plan portfolio WU(s) in TD (lower level plan portfolio definition, more (lower level definition. but refined) still not final) **Funding defined** per low level Funding definition & all refined per lower level sources definition identified WU def refined |-WU Type defined for all and possibility of additional WUs WUs for R&D Add'l budget Effort or new details

determined per

funding sources

budget details

to track

sources planned

additional funding





- TD (Near Year Planning POM Near-Years)
 - R&D Effort Manager (Branch Chiefs/ Effort Mgrs)
 - (Year funding inserted into POM) Draft High-Level Description for Effort/ WU, ROM Cost, High-Level Schedule, & High-Level Milestones per TD Leadership Gap Information
 - (Year funding inserted into POM) Obtain WU
 # (or establish additional WU(s) and gain
 additional WU #s as R&D activity is refined may be assigned by higher leadership level
 based on TD approval process/ business rules
 doesn't need to be DTIC accession # until
 NLT 6 mo. prior to execution year), and define
 high-level Planning budget detail (not
 Planning JON) Coordinate with TD P&P on
 Requirements and Schedule (via internal TD
 process)
 - Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments

- FY+ FY+2

 R&D Effort & WU(s) in TD plan portfolio (lower level definition, but still not final)

 R&D Effort & WU(s) in TD plan portfolio (lower level definition, more refined)

 Funding defined
 - Funding per low level definition & all sources identified
 - WU def refined and possibility of additional WUs

 WUs for R&D Add'l budget
 - Add'l budget details determined per funding sources
 - additional funding sources planned

to track

Effort or new

budget details



additional funding sources planned

Key Actions/ Use Cases



- TD (Near Year Planning POM Near-Years)
 - Work Unit Manager (S&E) Optional (may be done by R&D Effort Manager)
 - **Draft High-Level Description for Effort/WU, ROM Cost, High-Level Schedule, & High-Level** Milestones per R&D Effort Manager
 - (Year funding inserted into POM) Obtain WU # (or establish additional WU(s) and gain additional WU #s as R&D activity is refined may be assigned by higher leadership level based on TD approval process/ business rules doesn't need to be DTIC accession # until NLT 6 mo. prior to execution year), and define high-level Planning budget detail (not Planning JON) Coordinate with TD P&P on Requirements and Schedule (via internal TD process)
- FY+ FY+2 WU(s) in TD R&D Effort & WU(s) in TD plan portfolio (lower level plan portfolio definition, more (lower level definition. but refined) still not final) **Funding defined** per low level Funding refined per definition & all lower level sources definition identified WU def refined |-WU Type defined for all and possibility WUs of additional WUs for R&D Add'l budget Effort or new details budget details determined per to track

funding sources



funding sources planned

Key Actions/ Use Cases



- HQ AFRL (Near Year Planning POM Near-Years)
 - HQ POM Planners (HQ P&P Folks)
 - Review Overall TD Requirements Against ABIDES Baseline and AF S&T Plan
 - Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Focus Areas per Budget Changes and/or S&T Plan Goals/ Objectives to Senior Leadership
 - Recommend Adjustments to and Final AFRL POM Position to Senior Leadership
 - Document New Requirements/ Changes in AFRL POM Submissions
 - **HQ RM &/or FM Integrate Workforce Shaping Initiatives with Out-Year Planning**
 - **HQ FM** no direct action (other than RM)
- FY+ FY+2 WU(s) in TD R&D Effort & plan portfolio WU(s) in TD (lower level plan portfolio definition, more (lower level definition. but refined) still not final) **Funding defined** per low level Funding definition & all refined per lower level sources definition identified WU def refined |-WU Type defined for all and possibility WUs of additional WUs for R&D Add'l budget Effort or new details budget details determined per to track funding sources additional





- TD (Near Year Planning Budget Year)
 - TD Leadership (Director/ Division Chiefs)

- WU(s) in TD budget portfolio
- Requirements clearly defined
- Execution Year Funding/ sources finalized
- PRs drafted
- STINFO research performed and Execution WU assigned
- Execution JONs defined/ assigned
- JON(s) linked to WU(s)

- Review Existing TD Portfolio Against TD & AF S&T Plans/ Customer Requirements and Adjust S&T Focus Accordingly
- Review R&D Effort Roadmaps Against Requirements
 - Increase/ Decrease Emphasis on Ongoing R&D Efforts and Adjust Funding Correspondingly
 - Discontinue Funding for Unproductive or Unnecessary R&D Efforts
- Review Available Funding for New R&D Efforts/ WUs
- Determine Allocation of Available Resources (all Sources) to WUs to Align with Budget Plan (last POM position/ Fin Plan) and Resource Changes (PBDs, Congressional Ads, etc.)





- TD (Near Year Planning Budget Year)
 - TD POM Planners (Business Office/ TD P&P Folks)

FY+

- WU(s) in TD budget portfolio
- Requirements clearly defined
- Execution Year Funding/ sources finalized
- PRs drafted
- STINFO research performed and Execution WU assigned
- Execution JONs defined/ assigned
- JON(s) linked to WU(s) —

- Review TD Requirements Against ABIDES Allocation Baseline, Additional Funding, and AF S&T Plan
- Identify Available Funding for New R&D Efforts/ WUs
- Coordinate with TD Leadership and/ or R&D Managers on Allocation of Available Funding to Proposed R&D Efforts/ WUs
- Coordinate with R&D Managers on Specific Requirements and Schedule (via internal TD process)
- Address Impacts of Funding Changes
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments

TD HR - Align Manpower Requirements with Available Funds (all Sources) for Budget Plan (may be in conjunction with FM)





- TD (Near Year Planning Budget Year)
 - TD FM (Budget Folks)
 - Coordinate (via internal TD process) with WUM/ R&D Effort Manager on Fund Requirements (in conjunction with P&P)
 - Review PRs (in conjunction with P&P)
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Prepare FinPlan
 - Identify Available Funding (from All Sources)
 - Review TD Requirements Against ABIDES Allocation Baseline, Additional Funding, and AF S&T Plan
 - Manage Burdening/ Alignment of Overhead/Indirect (Coordinate with AFRL/FM for Corporate Withhold Alignment)
 - Coordinate with TD Leadership to Initially Allocate Funding
 - Submit FinPlan to HQ AFRL
 - Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Efforts/ WUs to Senior Leadership
 - Recommend Adjustments to Budget Year TD Funding Allocation for Submission to HQ AFRL
 - Recommend Position for Additional Execution Year Funds (EOY forward fund) for Internal Decision/ Submission to HQ AFRL

- WU(s) in TD budget portfolio
- Requirements clearly defined
- Execution Year Funding/ sources finalized
- PRs drafted
- STINFO research performed and Execution WU assigned
- Execution JONs defined/ assigned
- JON(s) linked to WU(s)





- TD (Near Year Planning Budget Year)
 - R&D Effort Manager (Branch Chiefs/ Effort Mgrs)/ WUM
 - Develops Spend Plan for new WU starts

Finalize Description for Effort, Cost, Schedule, & Milestones (may be performed by WUM)

- Obtain DTIC accession # and JON # (per defined business rules - may be performed by WUM)
- Perform STINFO/ Literature Searches, Environmental Impact Analysis, etc. (may be performed by WUM)
- Coordinate with TD P&P/FM on Requirements and Schedule (via internal TD process - may be performed by WUM)
- Address Impacts of Funding Changes from previous year's plan (may be performed by WUM)
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments

- WU(s) in TD budget portfolio
- Requirements clearly defined
- Execution Year Funding/ sources finalized
- PRs drafted
- STINFO research performed and Execution WU assigned
- Execution JONs defined/ assigned
- JON(s) linked to WU(s)





- HQ AFRL (Near Year Planning Budget Year)
 - HQ POM Planners (HQ P&P Folks) no direct action
 - HQ RM Review Manpower Alignment in FinPlan against Workforce Shaping Initiatives and Authorizations

HQ FM

- Review TD FinPlan Inputs
 - Review Overall TD Requirements Against ABIDES Baseline and AF S&T Plan
 - Coordinate with TDs for Withhold Allocation and Funds Alignment
- Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Focus Areas per Budget Changes and/or S&T Plan Goals/ Objectives to Senior Leadership
- Recommend Adjustments to and Final AFRL FinPlan Position to Senior Leadership
- Document New Requirements/ Changes in AFRL FinPlan Submissions to HQ AFMC

- WU(s) in TD budget portfolio
- Requirements clearly defined
- Execution Year Funding/ sources finalized
- PRs drafted
- STINFO research performed and Execution WU assigned
- Execution JONs defined/ assigned
- JON(s) linked to WU(s)





TD (Execution Year)

- TD Leadership (Director/ Division Chiefs)
 - Determine Final Allocation of Available Resources (all Sources) to WUs to Align with Fin Plan and Resource Changes (PBDs, Congressional Ads, etc.)
 - Perform LMRs for all WUs
 - Review JON Execution to Plan, Address Cause for Divergence, and Assess Impact to WU and Overall **R&D** Effort
 - Review Impacts of Budget Shortfalls or Increased **Emphasis on R&D Focus Areas per Budget Changes** and/or S&T Plan Goals/ Objectives
 - Decide Position for Additional Execution Year Funds, Director; BER; EOY Fallout Funds, for Internal Decision on Director's Allocation
 - Determine Position for Additional Execution Year Funds, BER; EOY Fallout Funds, for submission to **HQ AFRL**

- WU in TD fund portfolio
- Requirements defined per plan
- IONs linked to **WU/ funding**
- Funding execut-ed per plan





- TD (Execution Year)
 - TD POM Planners (Business Office/ TD P&P Folks)
 no direct action
 - TD HR Oversee Manpower Alignment to WUs/R&D Efforts to ensure alignment with Budget Plan (may be in conjunction with FM)

- WU in TD fund portfolio
- Requirements defined per plan
- JONs linked to WU/ funding
- Funding execut-ed per plan





- TD (Execution Year)
 - TD FM (Budget Folks)
 - Manage/ Monitor TD Budget Execution
 - Coordinate Adjustments with Divisions/ R&D Focus Area Leads per Changes to ABIDES Allocation Baseline, External Funding, and AF S&T Plan
 - Coordinate with TD Leadership for Funding Allocation
 - Manage Burdening/ Alignment of Overhead
 - Monitor WU execution (via JON) to FinPlan
 - Submit Execution Updates to Required FM Systems
 - Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Efforts/ WUs to Senior Leadership
 - Recommend Position for Additional Execution Year Funds, Director; BER; EOY Fallout Funds, for Internal Decision
 - Recommend Position for Additional Execution Year Funds, BER; EOY Fallout Funds, for submission to HQ AFRL

- WU in TD fund portfolio
- Requirements defined per plan
- JONs linked to WU/ funding
- Funding execut-ed per plan





TD (Execution Year)

- R&D Effort Manager (Branch Chiefs/ Effort Mgrs)
 - Coordinate with FM on Fund Requirements and Schedule (via internal TD process)
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments (spread to affected planning years)
 - Monitor Contracts (Extramural)/ Oversee In-House Work
 - Compare Resource Execution to Plan/ Schedule, Identify Cause for Divergence, and Describe Impact to WU Support of Overall R&D Effort

- FY
- WU in TD fund portfolio
- Requirements defined per plan
- JONs linked to WU/ funding
- Funding execut-ed per plan





TD (Execution Year)

- Work Unit Manager
 - Perform STINFO/ Literature Searches, Environmental Impact Analysis, etc. (if not already accomplished)
 - Obtain DTIC Accession #, and Execution Year JON # (if not already accomplished)
 - Coordinate with R&D Effort Manager/Branch Chief on Fund Requirements and Schedule (via internal TD process)
 - Identify impacts of budget shortfalls or increased emphasis on R&D Efforts/ WUs
 - Refine requirements and associated schedule adjustments (spread to affected planning years)
 - Monitor Contracts (Extramural)/ Oversee In-House Work
 - Prepare for LMR on WU
 - Compare Resource Execution to Plan/ Schedule, Identify Cause for Divergence, and Describe Impact to WU Support of Overall R&D Effort

- WU in TD fund portfolio
- Requirements defined per plan
- JONs linked to WU/ funding
- Funding execut-ed per plan





- HQ AFRL (Execution Year)
 - HQ POM Planners (HQ P&P Folks) no direct action
 - HQ RM Review Manpower Execution against Planned Allocation and Authorizations

- HQ FM

- Review TD Execution Year Fund Updates
 - Coordinate Adjustments with Directorates per Changes to ABIDES Allocation Baseline
 - Coordinate with AFRL Senior Leadership for Funding Allocation
 - Manage Burdening/ Alignment of AFRL Withholds
 - Perform Internal HQ AFRL Fund Allocation
- Monitor Fund Execution
- Consolidate/ Identify Impacts of Budget Shortfalls or Increased Emphasis on R&D Focus Areas per Budget Changes and/or S&T Plan Goals/ Objectives to Senior Leadership
 - Recommend Position for Additional Execution Year Funds, Commander; BER; EOY Fallout Funds, for Internal Decision
 - Recommend Position for Additional Execution Year Funds,
 BER; EOY Fallout Funds, for submission to HQ AFMC

- WU in TD fund portfolio
- Requirements defined per plan
- JONs linked to WU/ funding
- Funding execut-ed per plan



Issues



- Define How to Address Pervasive Technology within Single Hierarchical Linage
 - Pervasive Work Unit will be managed by its Parent R&D Effort
 - Parent R&D Effort will align funding to (from all sources) and defend the WU budget during POM and budget exercises
 - Parent R&D Effort will perform the management oversight for the pervasive Work Unit
 - TD leadership will assign fund alignment/support and management oversight role(s) to specific individual(s) per TD business rules
 - Pervasive WU will have "attributes" associated with it that will identify its linkage to other R&D Efforts and/or R&D Focus Areas
 - Linkage of pervasive WU to other than its parent R&D
 Effort will not maintain roll-up capability for budget linage



(cont'd)



- Clarify Assignment of Unique WU Numbering/Budget Detail During Planning Years (prior to more granular definition and STINFO research/posting)
 - Once EBS system is able, each planned WU will be assigned a unique identifier to track the WU and its associated attributes
 - Attributes will include parent R&D Effort, associated R&D Efforts (if pervasive WU), description, funding source(s), etc.
 - WU will maintain this unique identifier forever (identifier will not be assigned to any other WU even after all activity with the WU ends - either due to completion of case file or termination of need for the WU prior to it executing funds)
 - Budget Detail will be associated with WU via the WU unique identifier
 - Detail will include fund source(s), amount, and planned execution information (salary, travel, supplies, contracts, equipment purchases, etc.)
 - Detail will be used to identify required JON(s) for execution year fund tracking



(cont'd)



- Address How to Align the Variety of Funding Levels and Technology Evolution When Establishing and Tracking Planned WUs (To Ensure Equitable Alignment Across TDs & To Account for Differences in Technical Evolution for the Different Technology Areas)
 - Planned R&D Effort(s) and associated WU(s) will document funding sources in budget detail for each level of the hierarchy
 - Funding assignment will be able to be compared to overall funding levels as a percentage of the whole to provide a more equitable view of alignment of funding to requirements across AFRL
 - Planned R&D Effort and WU information will be documented and maintained in data structure
 - Data will be maintained in a historical file
 - Data on Planned R&D Efforts/WUs that are cancelled prior to executing funds (due to technical evolution or changes in R&D focus prior to executing year) will be maintained in long-term data storage



Next Steps



- Gain Feedback (Issues) from AFRL Directorates
- Coordinate Definition and TD Issues with Functional Champions
- Respond to TD Issues and Revise Definition (As Needed)
- Submit to AFRL CIO for Final Approval
- Update and/or Write New AFRL Instructions to Document Decisions (Submit for Directorate Coordination)
- Capabilities Managers and Functional Champions Develop Business Rules to Consistently Implement Work Unit Hierarchy in TD Processes and EBS Tools



Summary



- Work Unit Definition and Documentation is Mandated by AF and AFRL Instructions
- Use of Work Unit to Document Research Provides Multiple Benefits
- Current Definitions are Good, but Clarity will Improve their Consistent Application Across AFRL
- Business Rule Changes May Need to Occur Throughout AFRL to Implement the Hierarchy, but will Provide for Consistent Data and Reporting Capability